

United States Patent [19]
Claxton, III et al.

[54] FIELD-SERVICEABLE SOLIDS-HANDLING
VERTICAL TURBINE PUMP

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424.1

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[57] **ABSTRACT**

A vertical turbine pump which operates with its inlet submerged in a body of liquid to be pumped employs an impeller provided with two or three equiangularly spaced vanes and a diffuser section provided with three equiangularly spaced stationary vanes. A vertical turbine pump incorporating such a combination of impeller and diffuser vanes exhibits favorable hydraulic efficiency and smooth operation and can effectively handle liquids with entrained solids. The pump bowl bearings are part of a cartridge which is readily removed and installed through the upstream end of the pump to facilitate servicing in the field.

14 Claims, 4 Drawing Sheets